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EXAMINER

ABRISHAMKAR, KAVEH

ART UNIT	PAPER NUMBER
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2131

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/552,384

Applicant(s)

LECOMTE ET AL.

Examiner

KAVEH ABRISHAMKAR

Art Unit

2131

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 30-61 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 30-61 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)
- 3) ☒ Information Disclosure Statement(s) (PTO/SE/US)
Paper No(s)/Mail Date 12/13/05.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. This action is in response to the communication filed on October 7, 2005. Claims 1-29 were originally received for consideration. Per the received preliminary amendment, claims 1-29 are cancelled and claims 30-61 are added.
2. Claims 30-61 are currently pending consideration.

Information Disclosure Statement

3. An initialed and dated copy of Applicant's IDS form 1449, received on 12/13/2005, is attached to this Office action.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-61 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-29 of copending Application No. 11/167,783. Although the conflicting claims are not identical, they are not patentably distinct from each other because the present application 10/552,384, hereinafter '384, and application number 11/167,783, hereinafter '783, are directed towards the same invention though phrased differently. In claim 1, '783 calls for modifying at least a simple element according to a substitution operation, while the '384 calls for deletion and replacement of selecting information in the data stream. these are seen as analogous. Furthermore, '783 teaches modifying the stream and by a different path sending complementary information, which discloses the final limitation of claim 1 in '384. Therefore, the independent claims are rejected by double patenting because the claims of '384 are obvious in light of the claims of '783.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 30, 34-25, 39-43, and 45-61 are rejected under 35 U.S.C. 102(a) as being anticipated by over XP002328030 "Coding of Still Pictures."

Regarding claim 30, XP002328030 discloses:

A process for secured distribution of video sequences according to a digital stream format stemming from an encoding based on a processing by wavelets comprising frames comprising blocks containing coefficients of wavelets describing the visual elements, comprising:

analyzing the stream prior to transmission to client equipment to generate a modified main stream by deletion and replacement of selected information coding the original stream and having the format of the original stream (page 6: paragraph 2: *substitution function*), and complementary information of any format comprising the digital information coding the original stream and suitable for permitting reconstruction of the modified frames (page 9: Section 4, paragraph 1: *watermarking the result*); and

transmitting the modified main stream and the complementary information separately from a server to addressed equipment (page 2: introduction: *using two channels*).

Claim 34 is rejected as applied above in rejecting claim 30. Furthermore, XP002328030 discloses:

The process according to claim 30, wherein the wavelet coefficients to be modified are randomly selected and/or defined a priori (page 2: Section 1.2: paragraph 1: *pseudorandomly scrambling*).

Claim 35 is rejected as applied above in rejecting claim 35. Furthermore, XP002328030 discloses:

The process according to claim 30, wherein parameters for the scrambling are a function of properties of temporal scalability and/or spatial scalability and/or qualitative scalability and/or temporal scalability, transmission rate scalability and/or scalability by regions of interest offered by digital streams generated by wavelet-based coders (page 7: Section 3.5, paragraph 1: *performed according to the several levels*).

Claim 39 is rejected as applied above in rejecting claim 30. Furthermore, XP002328030 discloses:

The process according to claim 30, wherein modification of wavelet coefficients is carried out directly in a binary stream (page 7: Section 3.5: paragraph 1).

Claim 40 is rejected as applied above in rejecting claim 30. Furthermore, XP002328030 discloses:

The process according to claim 30, wherein modification of wavelet coefficients is carried out with a partial decoding (page 8: Section 3.5.1: *partial code stream*).

Claim 41 is rejected as applied above in rejecting claim 30. Furthermore, XP002328030 discloses:

The process according to claim 30, wherein modification of wavelet coefficients is carried out during coding or by carrying out a decoding then a complete re-encoding (page 8: rebuilding: *codestream rebuilt*).

Claim 42 is rejected as applied above in rejecting claim 30. Furthermore, XP002328030 discloses:

The process according to claim 30, wherein size of the modified main stream is strictly identical to the size of the original digital video stream (page 8: rebuilding: *codestream rebuilt*).

Claim 43 is rejected as applied above in rejecting claim 30. Furthermore, XP002328030 discloses:

The process according to claim 30, wherein substitution of the wavelet coefficients is carried out with random or calculated values (page 6: paragraph 2: *substitution function*).

Claim 45 is rejected as applied above in rejecting claim 30. Furthermore, XP002328030 discloses:

The process according to claim 30, wherein visual scrambling obtained in a group of frames is limited spatially in a region of interest of each frame (page 4: paragraph: *image region*).

Claim 46 is rejected as applied above in rejecting claim 30. Furthermore, XP002328030 discloses:

The process according to claim 30, wherein the complementary information is organized in layers of temporal and/or spatial and/or qualitative and/or transmission rate scalability and/or scalability by region of interest (page 4: paragraph: *image region*).

Claim 47 is rejected as applied above in rejecting claim 30. Furthermore, XP002328030 discloses:

The process according to claim 30, wherein the stream is progressively descrambled with different levels of quality and/or resolution and/or frame rate and/or according to a region of interest via sending a part of the complementary information corresponding to layers of qualitative and/or spatial and/or temporal scalability and/or scalability for a region of interest (page 9: Section 4, paragraph 1: *watermarking the result*).

Claim 48 is rejected as applied above in rejecting claim 30. Furthermore, XP002328030 discloses:

The process according to claim 30, wherein the stream is partially descrambled according to different levels of quality and/or resolution and/or frame rate and/or according to a region of interest via sending a part of the complementary information corresponding to a layer or layers of qualitative and/or spatial and/or temporal scalability and/or scalability for this region of interest (page 7, Section 3.5: paragraph 1).

Claim 49 is rejected as applied above in rejecting claim 30. Furthermore, XP002328030 discloses:

The process according to claim 30, wherein a synthesis of a digital stream in an original format is calculated in addressed equipment as a function of the modified main stream and the complementary information (page 8: Section 3.5.1: *codestream rebuilding*).

Claim 50 is rejected as applied above in rejecting claim 30. Furthermore, XP002328030 discloses:

The process according to claim 30, wherein transmission of the modified main stream is realized via a physically distributed material support (page 8: Section 3.5.1: *codestream rebuilding*).

Claim 51 is rejected as applied above in rejecting claim 30. Furthermore, XP002328030 discloses:

The process according to claim 30, wherein the modified main stream undergoes operations of transcoding, rearrangement and/or extraction of frames or groups of frames during transmission (page 8: Section 3.5.1: *codestream rebuilding*).

Claim 52 is rejected as applied above in rejecting claim 30. Furthermore, XP002328030 discloses:

The process according to claim 30, wherein transmission of the complementary information is realized via a physically distributed support material (page 8: Section 3.5.1: *codestream rebuilding*).

Claim 53 is rejected as applied above in rejecting claim 30. Furthermore, XP002328030 discloses:

The process according to claim 30, wherein modification of wavelet coefficients is reversible and a digital stream reconstituted from the modified main stream and from the complementary information is identical to the original stream (page 8: Section 3.5.1: *codestream rebuilding*).

Claim 54 is rejected as applied above in rejecting claim 30. Furthermore, XP002328030 discloses:

The process according to claim 30, wherein modification of wavelet coefficients is reversible and a portion of the digital stream reconstituted from the modified main

stream and from the complementary information is identical to a corresponding portion in the original stream (page 8: Section 3.5.1: *codestream rebuilding*).

Claim 55 is rejected as applied above in rejecting claim 53. Furthermore, XP002328030 discloses:

The process according to claim 53, wherein reconstitution of a descrambled video stream is controlled and/or limited in terms of predefined frame rate and/or resolution and/or transmission rate and/or quality as a function of rights of a user (page 4: paragraph 1: *user rights determine authorization level*).

Claim 56 is rejected as applied above in rejecting claim 54. Furthermore, XP002328030 discloses:

The process according to claim 54, wherein reconstitution of a descrambled video stream is controlled and/or limited in terms of predefined frame rate and/or resolution and/or transmission rate and/or quality as a function of rights of a user (page 4: paragraph 1: *user rights determine authorization level*).

Claim 57 is rejected as applied above in rejecting claim 53. Furthermore, XP002328030 discloses:

The process according to claim 53, wherein reconstitution of a descrambled video stream is controlled and/or limited in terms of predefined frame rate and/or resolution and/or transmission rate and/or quality as a function of viewing apparatus on

which it is visualized (page 2: Section 1.2: paragraph 2: *dependent on receiving equipment*).

Claim 58 is rejected as applied above in rejecting claim 54. Furthermore, XP002328030 discloses:

The process according to claim 54, wherein reconstitution of a descrambled video stream is controlled and/or limited in terms of predefined frame rate and/or resolution and/or transmission rate and/or quality as a function of viewing apparatus on which it is visualized (page 2: Section 1.2: paragraph 2: *dependent on receiving equipment*).

Claim 59 is rejected as applied above in rejecting claim 53. Furthermore, XP002328030 discloses:

The process according to claim 53, wherein reconstitution of a descrambled video stream is carried out in a progressive manner in stages under reconstitution of the original video stream is achieved (page 8: Section 3.5.1: *codestream rebuilding*).

Claim 60 is rejected as applied above in rejecting claim 54. Furthermore, XP002328030 discloses:

The process according to claim 54, wherein reconstitution of a descrambled video stream is carried out in a progressive manner in stages under reconstitution of the original video stream is achieved (page 8: Section 3.5.1: *codestream rebuilding*).

Regarding claim 61, XP002328030 discloses:

at least one multimedia server containing original video sequences (Figure 1, page 3: Section 3: raw image input);

a device for analyzing the video stream (Figure 1, Page 3: Section 3: input adapter and Medialiver);

a device for separating the original video stream into a modified main stream by deletion and replacement of selected information coding the original visual signal (page 6: paragraph 2: *substitution function*) and into complementary information as a function of this analysis (page 9: Section 4, paragraph 1: *watermarking the result*); and

at least one device in addressed equipment for reconstruction of the video stream as a function of the modified main stream and the complementary information (page 8: Section 3.5.1: *codestream rebuilding*).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 31-33, 36-38, and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over XP002328030 "Coding of Still Pictures" in view of Moyano et al. ("Efficient 3D Wavelet Transform Decomposition for Video Compression."

Regarding claims 31-33, and 44, XP002328030 does not explicitly disclose modifying wavelets belonging to spatial and temporal subbands. Moyano discloses transforming wavelets to provide both spatial and frequency-domain information about an image/frame (Moyano: page 113: Section II: paragraph 1) and decomposing the frames both temporally and spatially (Moyano: page 121: Section IV: paragraph 1). It would have been obvious to implement the method of Moyano into the system of XP002328030 to provide temporal decomposition in a more efficient way (Moyano: see Abstract).

Regarding claims 36-38, XP002328030 does not explicitly disclose that the visual integrity of degradation of visual sequences is determined by a quantity of modified wavelet coefficients, and the visual degradation of the video sequences decoded are determined according to the spatial-temporal subband. Moyana discloses an algorithm for temporal decomposition (Moyano: page 121, Section IV: paragraph 1). It would have been obvious to implement the method of Moyano into the system of XP002328030 to provide temporal decomposition in a more efficient way (Moyano: see Abstract).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KAVEH ABRISHAMKAR whose telephone number is (571)272-3786. The examiner can normally be reached on Monday thru Friday 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on 571-272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kaveh Abrishamkar/
Examiner, Art Unit 2131

/K. A./
09/21/08
Examiner, Art Unit 2131